

Test Yourself Chapter 15 Relative frequency and probability

Name: _____

All Multiple Choice

- 1** A survey of 400 students showed that 250 were in favour of a new school uniform. The relative frequency of a student favouring the new school uniform is: **D**

A 0.250
B 0.400
C 0.5
D 0.625

- 2** In a survey of 1000 voters, it was found that 800 voted at the last election. **A**

The relative frequency of a person who did not vote at the last election is:

A 0.2
B 0.4
C 0.6
D 0.8

- 3** In another survey of 500 voters, it was found that 150 supported the Australian Democrats. The relative frequency of voters supporting the Democrats is: **B**

A 20%
B 30%
C 50%
D 60%

- 4** Consider the following table of car colours in a parking lot. **B**

	Red	White	Blue	Yellow	Green
Ford	2	3	1	2	3
Holden	1	6	2	4	1
Toyota	1	3	0	1	0
Mazda	2	3	0	1	1

The relative frequency of white Holdens is:

A $\frac{1}{20}$
B $\frac{6}{37}$
C $\frac{6}{15}$
D $\frac{6}{14}$

- 5** In a bag there are 4 yellow, 2 blue and 5 red marbles. The probability of selecting a blue marble is: **B**

A 0
B $\frac{2}{11}$
C $\frac{2}{9}$
D 1

- 6** If I bought eight tickets in a raffle and the probability that I win is $\frac{8}{100}$, the total number of tickets sold in the raffle must be: **C**
- A 1
B 8
C 100
D 108
- 7** When a die is thrown, the probability of rolling a number greater than 2 is: **D**
- A $\frac{1}{6}$
B $\frac{1}{3}$
C $\frac{1}{2}$
D $\frac{2}{3}$
- 8** A box contains 3 yellow balls, 5 blue balls and 8 black balls. One ball is chosen at random. The probability of it being blue is: **A**
- A $\frac{5}{16}$
B $\frac{1}{2}$
C $\frac{11}{16}$
D $\frac{13}{16}$
- 9** A card is drawn from a standard pack of 52 playing cards. The probability of the card being a Jack, Queen or King is: **A**
- A $\frac{3}{13}$
B $\frac{7}{13}$
C $\frac{3}{26}$
D $\frac{8}{13}$
- 10** A number is selected at random from the numbers 1 to 20. As a decimal, the probability that the number chosen is 14 is: **A**
- A 0.05
B 0.14
C 0.2
D 0.5
- 11** A bag that contains 4 pink counters, 7 maroon counters and 9 crimson counters. One counter is chosen at random. As a percentage, the probability that the counter chosen is maroon is: **B**
- A 20%
B 35%
C 45%
D 70%
- 12** A raffle has 50 tickets. If I purchase 8 tickets, the probability of winning first prize in the raffle is: **C**
- A 0.05
B 0.08
C 0.16
D 0.5
- 13** When we select a card from a standard deck, the probability that the card chosen is either a King, Queen or Jack is: **C**
- A 8%
B 13%
C 23%
D 25%

- 14** Which of the following events could be described as certain? **C**
- A Rolling two dice and getting a total of 1.
 - B Rolling a die and getting an even number.
 - C Rolling two dice and getting a total less than 20.
 - D Rolling a die and getting a number greater than 1.
- 15** Which of the following events could be described as being impossible? **A**
- A Rolling two dice and getting a total of 1.
 - B Rolling a die and getting an even number.
 - C Rolling two dice and getting a total less than 20.
 - D Rolling a die and getting a number greater than 1.
- 16** The probability of selecting a green ball from a box is $\frac{2}{5}$. The probability of selecting any other colour is therefore: **B**
- A $\frac{2}{5}$
 - B $\frac{3}{5}$
 - C 1
 - D 2
- 17** On a roulette wheel there are 18 black numbers, 18 red numbers and 1 green number. On a random spin, the probability of a black number not occurring is: **D**
- A $\frac{1}{37}$
 - B $\frac{1}{36}$
 - C $\frac{19}{36}$
 - D $\frac{19}{37}$
- 18** On a spinner on which the numbers 1 to 8 are written, a successful event is considered to be spinning an even number. The complement of this would be: **C**
- A {1,2,3,4,5,6,7,8}
 - B {2,4,6,8}
 - C {1,3,5,7}
 - D {8}
- 19** If a successful event is considered to be selecting a picture card from a pack of cards, then the complement of this event would be: **A**
- A selecting a number card or an ace
 - B selecting an ace
 - C selecting a diamond
 - D selecting a picture or a number card.
- 20** If a successful event has a probability of $\frac{1}{4}$, then its complement must have a probability of: **B**
- A $\frac{1}{4}$
 - B $\frac{3}{4}$
 - C 1
 - D 3